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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,790	04/27/2001	Yong Chang	678-660(P9808)	1075

7590

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EXAMINER
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TRINH, TAN H

ART UNIT	PAPER NUMBER
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2684

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DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/843,790

Applicant(s)

CHANG, YONG

Examiner

TAN TRINH

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 11-13 is/are allowed.
- 6) ☒ Claim(s) 6, 8-10 is/are rejected.
- 7) ☐ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 6-9-2003 has been received and placed of record in the file.

### ***Allowable Subject Matter***

2. Claims 1-5 and 11-13 are allowed.
3. Claims 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Reasons for allowance***

4. The following is a statement of reasons for the indication of allowable subject matter:

The reference of Rezaiifar and the prior art of record fail to teach, a method of transmitting power control information to a BSC (Base Station Controller) in a BTS (Base station Transceiver System) of a mobile communication system, comprising the steps of: receiving forward power control (FPC) mode information indicating a slow power control from the BSC and transmitting the FPC mode information to an MS (Mobile Station); extracting an EIB (Erasure Indicator Bit) that is a power control command in a frame period from a reverse pilot channel received from the MS according to the FPC mode information; determining the status of the EIB; and transmitting a reverse SCH (Supplemental Channel) message including the EIB status information to the BSC, as cited in claim 1. And a method of transmitting a signal to a

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BSC (Base Station Controller) in a BTS (Base Station Transceiver System) of a mobile communication system, comprising the steps of: checking a forward power control mode (FPC\_MODE); receiving an EIB (Erasure Indicator Bit) on a reverse pilot channel from an MS (Mobile Station) when the forward power control mode indicates a slow power control; and transmitting a reverse SCH (Supplemental Channel) message including the received EIB to the BSC, as cited in claim 4.

In addition, the prior art of record fail to teach, a method of controlling the power of forward channels transmitted from a BTS (Base Station Transceiver System) to an MS (Mobile Station) in a mobile communication system, comprising the steps of: determining power control rates for a forward FCH (Fundamental Channel)/DCCH (Dedicated Control Channel) and a forward SCH (Supplemental Channel); performing a slow power control on the FCH/DCCH at the determined power control rate according to a power control command received for one frame period from the MS; and performing a fast power control on the SCH at the determined power control rate according to a plurality of power control commands received for one frame period from the MS, as cited in claim 11. And a method of transmitting power control information to a BSC (Base Station Controller) in a BTS (Base station Transceiver System) of a mobile communication system, comprising the steps of: detecting a discontinuous transmission (DTX) period by measuring the energy of a supplemental channel (SCH) frame received from a mobile station (MS); checking a forward power control mode (FPC\_MODE) if the DTX period is detected; extracting a power control command from a reverse pilot channel according to the forward power control mode; performing a fast power control on a forward SCH according to a power control bit (PCB) if the power control command is the PCB; and transmitting a reverse

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SCH message including an erasure indicator bit (EIB) status value to the BSC if the power control command is an EIB, as cited in claim 13.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar (U.S. Patent No. 6,377,809) in view of Wood (U.S. Patent No. 6,092,230).

Regarding claim 6, Rezaiifar teaches a method of transmitting power control information to a BTS (Base Station Transceiver System) in a BSC (Base Station Controller) of a mobile communication system (see fig. 5 and fig. 8C), comprising the steps of: receiving a reverse SCH (Supplemental Channel) frame and a reverse SCH message including power control information from the BTS (see col. 1, lines 50-61, col. 8, lines 60-64); extracting an EIB (Erasure Indicator Bit) that is a power control command in a frame period from the reverse SCH message (see col. 9, lines 6-7, lines 43-47, and col. 10, lines 29-60); Rezaiifar teaches the transmission of the first and second on predetermine threshold (see col. 3, lines 50-66), and transmitting a forward SCH message including the threshold to the BTS (see col. 16, lines 54-63). But Rezaiifar fails to teach the determining a forward power control threshold based on the EIB.

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However, Wood teaches the determining a forward power control threshold based on the EIB (see col. 2, lines 48-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Rezaiifar system and by the teaching of Wood with the frame erasures bit correction threshold thereto in order to improve perceived audio quality to the end user.

7. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar (U.S. Patent No. 6,377,809) in view of Palenius (U.S. Patent No. 6,512,750).

Regarding claim 8, Rezaiifar teaches a method of controlling the power of forward channels transmitted from a BTS (Base Station Transceiver System) to an MS (Mobile Station) in a mobile communication system (see figs. 1-2), comprising the steps of: determining power control rates for a forward FCH (Fundamental Channel)/DCCH (Dedicated Control Channel) and a forward SCH (Supplemental Channel) (see col. 7, line 60-col.8, line 64). But Rezaiifar fails to teach the performing a fast power control on the FCH (Fundamental Channel)/DCCH at the determined power control rate according to a plurality of power control commands received for one frame period from the MS; and performing a slow power control on the SCH at the determined power control rate according to a power control command received for one frame period from the MS.

However, Palenius teaches performing a fast power control on the FCH (Fundamental Channel)/DCCH at the determined power control rate according to a plurality of power control commands received for one frame period from the MS; and performing a slow power control on

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the SCH at the determined power control rate according to a power control command received for one frame period from the MS (see col. 3, lines 61-col. 4, line 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Rezaiifar system and by the teaching of Palenius with the fast and slow power control technique thereto in order to provide user with the slow power control loop to adjust the SIR target and that the fast control loop to adjust the base station's transmitted power (see col. 4, lines 9-19).

Regarding claim 9, Palenius teaches wherein a forward power control threshold is changed according to the power control command received for one frame period in the slow power control (see col. 3, lines 43-46).

Regarding claim 10, Palenius teaches wherein the transmission power of the SCH is increased or decreased by a predetermined power value according to the plurality of power control commands received for one frame period in the fast power control (see col. 3, lines 61-col. 4, line 34).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ziv (U.S. Patent No. 5,884,187) discloses method and apparatus for providing centralized power control administration for a set of base stations.

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Dobrica (U.S. Patent No. 6,070,086) discloses closed loop power transmitter power control unit for a cdma cellular system.

9. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (703) 305-5622. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tan H. Trinh  
Art Unit 2684  
April 12, 2004

  
**NICK CORSARO**  
**PATENT EXAMINER**  
Primary